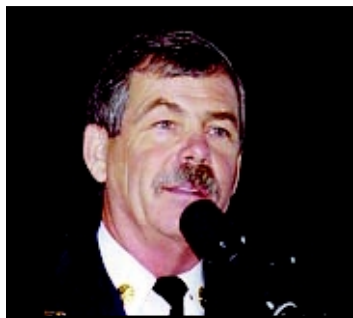


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Turkey/Taiwan 1999      Fairfax County Fire and Rescue Department





Edward L. Stinnette

*"I've been fortunate to work with a lot of people in this organization who are willing to go that extra mile to ensure that Virginia Task Force One is the best it can be."*

## From The Fire Chief . . .

I have been asked to reflect on the last three deployments and share some of my thoughts and observations about the team. The first thing I realized is that three international deployments in 90 days stretches the department's resources to the maximum. However, more importantly, I realized it also brings out the very best in our organization. I've been fortunate to work with a lot of people in this organization who are willing to go that extra mile to ensure that Virginia Task Force One (VATF-1) is the best it can be. They are also committed to ensuring that the services we provide the citizens of Fairfax County remain second to none. When I am asked to talk about or reflect on these three deployments, the first thing that comes to my mind is pride.

... Pride in the men and women of VATF-1 who are willing to drop everything they are doing and put their lives on hold to respond half way around the world on a moments notice to assist people dealing with disaster.

... Pride in the members of this organization who don't leave the country, but who work the overtime and do whatever is necessary to ensure that we continue to provide the highest level of service to our citizens. This group is often overlooked, not so much by the Department, but by the media who are focusing on the outstanding accomplishments of the team and not looking at what it takes to keep this big machine functioning on a daily basis.

... Pride in the civilians of this Department who work endless hours to ensure that the team has what it needs to accomplish its mission and to guarantee that the team's families have all the support they need during the deployment. Many of these members work in the background making things happen without ever seeking recognition.

... Pride in the family members whose daily routines are totally disrupted every time the team is activated. I had the opportunity to talk with many of them during the last three deployments, and although each time brings its own set of challenges, these individuals do whatever it takes to support their spouses during deployments. It is very apparent just how proud they are of their loved ones and how willing they are to make whatever sacrifices necessary in hopes that the team mission will be successful.

... Pride in the family support group who became active during our last deployment. This group saw a dire need and was willing to dedicate and give of themselves to help the Department care for the members who were deployed. Providing support to the families who were left behind is an important function that is vital to team members, families, and the Department. This group was very effective during the last mission and I look forward to working with them in the future.

It is apparent to me that it is not just the 60 or 70 members who board the C5A to answer another international 911 call, but rather the efforts of our entire Department and all the family members that make VATF-1 – the best in the world.

❖

Edward L. Stinnette, *Fire Chief*  
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Fairfax County  
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LINE COPY is the newsletter of the Fairfax County Fire and Rescue Department and is published by the Department's Public Information and Life Safety Education Section. Questions regarding deadlines or publication schedule should be addressed to Jackie Lewis at 246-3801. All submissions should be sent to the Public Information and Life Safety Education Section, marked "Attn: Editor, LINE COPY."

# Total Commitment



By Battalion Chief Michael Tamillow  
Battalion 3, B-Shift

On Tuesday, August 17, 1999, an earthquake measuring 7.8 on the Richter Scale lasting 45 seconds struck Izmit, Turkey, approximately 55 miles southeast of Istanbul. This occurred at 3:02 a.m. local Turkish time. As I was driving to work that morning I listened to it on the radio. As soon as I arrived at work and saw the pictures on CNN, I was in touch with Mr. Pete Bradford, OFDA, and we were placed on alert for possible deployment. This proved fortunate as it gave us a heads up and an opportunity to prepare for the full activation in response to the earthquake that occurred at 11 a.m.

Virginia Task Force One has developed an effective mobilization procedure, refined over ten years, which allows us to effectively organize and mobilize the 65-70 personnel and the more than 58,000 pounds of tools, equipment and supplies that make up the task force cache. This all occurred in about four hours. By 3 p.m. all elements of the task force were assembled at the Training Academy. The task force conducted a full team briefing and departed by bus for Dover Air Force Base at 4:30 p.m. to meet up with our C5A transport aircraft for the 13-hour flight to Istanbul, Turkey. After arriving at Dover at 7:30 p.m., the task force had to address the required paperwork dealing with passenger manifesting and cache hazardous materials certification paperwork, vehicle onloading, and flight crew rest/rotation scheduling. Wheels up was shortly after midnight.

After arriving at Ataturk International Airport at 9:30 p.m. (local time Istanbul), we off-loaded our vehicles and equipment, processed passport and visa requirements and interacted with authorities to find out about local conditions. This took more than three hours. We were provided police escorts for our 65-mile trip to the city of Izmit at the epicenter of the earthquake. As we approached the city from a

20-mile distance, we could see a small fire. As we reached the outskirts of the city, this small flame had become a huge, spectacular fire at the Tupras oil refinery that had been on fire since the earthquake occurred. It provided an amazing backdrop as we entered the impacted area. We finally arrived at our assigned location; a neighborhood called Yavuz Sultan Maii in the southeast quadrant of Izmit, at approximately 4 a.m. Thursday morning, totally dark. This area had been identified by in-country USAID personnel prior to our arrival as being one of the hardest hit.

Upon arrival, our highest priority was to select an appropriate site and get our Base of Operations (BoO) set up. We were fortunate to find an asphalt go-kart track that turned out to be perfect for our needs. After we moved hundreds of tires to the perimeter, all efforts were directed towards off-loading our cache and setting up a small tent city. This is an amazing process to watch as 70 competent, motivated people spring into action. In less than two hours the BoO was functioning. We began search and rescue operations immediately at daybreak.

At first light, we deployed two Search & Recon Teams into the devastated community. This area was both a commercial and residential community comprised mostly of mid-rise, multi-residential buildings, many totally collapsed.

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A S&R Team is composed of nine personnel, including a Search Team Manager, two canine handlers/dogs, a technical search specialist, paramedic, structural engineer, haz mat specialist, and two rescue specialists. This nine-person team is able to quickly and safely sweep through an area searching for victims. They also evaluate building conditions, assess safety hazards and begin initial rescue assessment if a victim is found. Upon finding a trapped person, the team radios back for rescue assistance and a six-person Rescue Squad (one officer and five specialists) with appropriate tools and equipment.

From daybreak through the early morning hours, the S&R Teams had little success. Again, with every additional hour our life-saving window was closing. At 11:10 a.m., the S&R Red Team radioed that they were on the scene of a possible victim located by a German search team. Fifteen minutes later, S&R Blue Team radioed that they too were on the scene with a conscious, 27-year-old woman in a collapsed building. We began dispatching rescue squads to those locations to begin life-saving extrications. What had started out as a quiet morning suddenly turned into an extended series of rescue operations that taxed the Task Force to the maximum. Over the next 10 hours, Task Force personnel conducted six separate extrication operations, each lasting from two-and-a-half to six hours in length.

We removed four live victims. Our search personnel followed up during this period with a 30-year-old woman trapped in a lean-to collapse and later a 40-year-old man. The male was so tightly entrapped that they first thought he was another person trapped in the void, however, instead his legs were tightly folded against him.

In the middle of this extended period of operation, a backhoe operator working about 50 yards across from our command post found a small boy alive in a totally collapsed building. All of our search teams and rescue squads were out and working. Assistant Task Force Leader Dewey Perks, Operations Officer Dan Bickham and several other personnel radioed back for more help. We took the few remaining personnel

at the command post and directed them to assist. We began querying the other work sites requesting available personnel and equipment. At that point we had only myself, one communications and one logistics specialist left in the BoO.

The Logistics Section of the task force are the unsung heroes of any mission. Logistics specialists Andy Hubert, Don Booth, Dave Taylor and Barry Anderson directly manage and coordinate the myriad of tools, supplies and equipment in the cache. Equally so, the contingent of vehicle drivers led by Dean Cox, along with Dallas Slemph and Shawn McPherson, also performed amazing feats ferrying personnel and equipment to various work sites. Their efforts sustained the fast paced rescue operations.

These people pulled the little remaining equipment from the BoO while simultaneously shuttling personnel and equipment to various work sites. This continued throughout the long day until all rescue sites were terminated at approximately 10 p.m.

Taking into account activation/mobilization time, a 13-hour flight, ground travel to Izmit, set-up time and extended operations, most personnel had now been awake more than 54 hours. Consequently, the decision was made to rest the entire task force as there were no active work sites. (Normally we try to stagger task force personnel at the beginning of a mission so that we eventually split into Red and Blue Teams each working either 12-hour daytime or 12-hour nighttime operational periods.) In spite of this attempt to provide rest for the entire task force, we received word at 2 a.m. from local citizens that another victim was found. We dispatched rescue personnel who operated for two hours at the site before gaining access and finding the dead victim.

Throughout this process, task force leaders and team managers had to still address normal management considerations to ensure the safety and health of our personnel. While we had clear weather for all of our stay, it was hot and humid during daylight hours with the temperature rising into the 90's by noon. Hydration and feeding was critical. MREs (Meals-Ready-to-Eat)

from our cache supplied most of our meals. Ancillary issues of potable water and fuel resupply, handwashing and hygiene, toilet and shower considerations, trash management and removal, all had to be addressed. We had to manage team briefings, overall radio communications, mission activity tracking, situation reporting back home, search area sectoring and tracking, medical infrastructure assessment and victim hand-off considerations, medevac considerations, directing local and volunteer teams into the city crisis center, and coordinate with other international teams.

Due to the good condition of the victims being extricated (several only had moderate abrasions after being entrapped more than 48 hours) and the level of activity, we decided to request the activation of our sister organization, the Miami-Dade US&R Task Force — FLTF-1. Chuck Mills operating as the liaison in our OFDA overhead team had been reconnoitering outlying areas that were heavily impacted. This assessment, coupled with other information coming from local sources, indicated that there were other areas that would benefit from a separate US&R task force. The recommendation was made Thursday morning, and that afternoon Miami-Dade was mobilized.

On Friday morning, we again deployed both S&R teams as soon as possible. Friday and Saturday consisted of long days having our S&R teams handling roving search operations and responding to any local requests. None of the operations resulted in live finds. It appeared that the window of opportunity was beginning to shut quickly. By the end of the third day of operations we had searched approximately 11 square miles (most areas assessed twice), evaluated a total of 70 separate possible work sites, conducted intense search operations at 45 of these sites using canine, search cameras and electronic listening devices, conducted rescue operations at 25 sites and identified or removed 40 DOAs – a total of 86 hours of field operations. These efforts essentially exhausted our task force. Miami-Dade arrived Saturday evening and by Sunday morning had assumed responsibility for all continued operations. VATF-1 began to

demobilize and return home. It proved to be an outstanding mission returning all personnel home safe and sound.

Task Force Leader Dewey Perks wants to congratulate all the members on this mission for their outstanding efforts and accomplishments. Equally so, we don't want to forget the efforts of the many people who worked tirelessly at home and contributed fully to the success of the mission. We couldn't have done it without them. On behalf of all the personnel on VATF-1, I would like to thank Fire Chief Edward Stinnette and the Department Senior Staff, the County Board of Supervisors and County Executive O'Neill, as well as the U.S. Agency for International Development and the Office of U.S. Foreign Disaster Assistance for their dedication, support and assistance. It is truly an honor to represent the United States of America. ❖



Base of Operations for the first deployment to Turkey.

**Editor's Note:** Mike Tamillow is a battalion fire chief with the Fairfax County, Virginia, Fire and Rescue Department with more than twenty-six years of experience. He is responsible for daily field operations in Battalion 3. Battalion Chief Tamillow was the Task Force Leader for mission responses to Soviet Armenia in 1988, and Baugio, Philippines in 1990 (earthquakes); Oklahoma City in 1995 (assigned as nighttime IST Leader), and the U.S. Embassy in Nairobi, Kenya in 1998 (terrorist bombings); Izmit, Turkey in August 1999, Touluiu, Taiwan, in September 1999, and Düzce, Turkey in November, 1999 (earthquakes). He has been involved in the development of both the OFDA and FEMA US&R Response Systems since 1987.

# Touliu, Taiwan Earthquake Response

*By Battalion Chief Michael Tamillow  
Battalion 3, B-Shift*

**O**n Tuesday, 21 September, 1999, a significant earthquake measuring 7.6 on the Richter Scale struck the central part of the island of Taiwan at approximately 1:30 a.m. Again, another killer earthquake struck while people were asleep. It was a shallow (~5 km) thrust earthquake, caused by the collision between the Philippine Sea and Eurasian plates. The tectonic environment near Taiwan is unusually complex. Tectonically, most of Taiwan is in a collision zone between the Philippine Sea and Eurasian plates. The hypocenter was surrounded by aftershocks, the largest of which was a 6.8 which struck hours after the primary shock.

The east coast of the United States is 12 hours behind Taiwan time. It didn't take long to hear about the occurrence that afternoon while at work driving between stations in the third battalion. Taiwan is a densely populated country of approximately 22 million living on an island, 1/10 the size of California. It seemed clear that a large earthquake of this magnitude did not bode well for the Taiwanese. In a short period, I was in touch with personnel from the U.S. Agency for International Development's querying them about the event. They were receiving earthquake information and assessments by 5 p.m. EDT, (only three hours after the occurrence) Virginia Task Force One (VATF-1) was then placed on alert for possible mission response.

That evening, after receiving definitive damage information, we were fully activated at 10 p.m. EDT, only nine hours after the earthquake. Along with the activation order for a full 66-person US&R task force, OFDA requested that we staff a 15-person Advance Team that would be deployed as soon as possible on contract aircraft out of Washington Dulles International Airport. While addressing the myriad of duties and details associated with a

full deployment, we also assembled an Advance Team composed of Fairfax and Miami-Dade personnel (our sister organization in the OFDA program). Personnel addressing the US&R functions of command, search, rescue, medical, communications, safety, hazmat, and liaison/media were quickly assembled and departed at 1:30 a.m. (approximately 12 hours after the event).

After loading the aircraft with our equipment cache carried on a 40-foot tractor trailer and two 16-foot box trucks, we finally went wheels up 9:45 a.m., EDT on Tuesday, September 21, (19 hours after the earthquake) for the 18-hour flight to the capital city of Taipei aboard a USAF C5A aircraft.

We landed at General Chiang Kai Shek International Airport at 4:30 p.m. on Wednesday, September 22 (after taking into account the 12-hour time change across the International Dateline). After addressing necessities such as local liaison, passport and visa requirements, vehicle off-loading, we were able to depart the airport in less than two hours. Our assignment was the city of Touliu (pronounced – "doe-lee-o") in the central county of Nantou, approximately 110 miles south of Taipei. This commercial, residential city of 100,000 was near the epicenter of the earthquake. After a three-hour ride, we arrived at our assigned site at 9:45 p.m. local time, some 43 hours after the earthquake. Our Advance Team had arrived on site about five hours before the task force and had been interacting with the local emergency managers and assessing available sites for our Base of Operations (BoO).

Our Advance Team was amazed at the preparedness of the Taiwan emergency management officials. They were briefed using a PowerPoint presentation showing all the collapsed buildings in the city, and were

provided building plans for each and we were provided city maps. Upon completion, they were directed to an immediate rescue of a trapped 32-year-old male in the lower level of a collapsed 12-story building. They also identified an excellent site for our BoO. This turned out to be a fenced basketball court in the center of a mid-rise residential area in close proximity to the collapsed buildings.

Taiwan was well prepared for earthquakes, especially with regard to building construction standards. The vast majority of the buildings (at least in Toului) performed remarkably well. The ones that did collapse suffered from “soft” stories in the first through fourth floors. A soft story is essentially a more open floor plan design, such as a parking area, large lobby / commercial / mezzanine area, that is usually weaker due to fewer intermediate walls and supports. As these sections gave way, the upper floors (another six to ten stories of stronger residential floor plans) maintained their basic integrity and came down essentially intact on top of the collapsed floors, but listing at a dangerous attitude. The result was a top heavy, unstable collapse site.

I am usually not comfortable deploying Search and Recon Teams around and into severely damaged buildings in total darkness as was the case in Turkey. Here we deployed the Blue Search & Recon Team shortly after arrival at 10:15 p.m. to perform search evolutions in and around the lower floors of Building A (the first building where the 32-year-old male was trapped — designated Site One). Building A was a 12-story building that suffered from lower floor collapse and came down leaning heavily on an adjacent four-story building (Building B). Additionally, Blue Rescue Squad Two was immediately deployed to back-up Advance Team personnel who were initiating the rescue. Within



20 minutes, Blue Search & Recon Team heard sounds of what seemed like the noise of a toy coming from a second site at Building A. Blue Rescue Squad Four was dispatched to begin rescue operations in the event a child was nearby.

Red Search & Recon Team was deployed shortly after midnight to a different part of the city where three identical high-rise residential buildings had collapsed (Buildings C, D and E). Search operations consisting of canine sweeps, electronic listening and SearchCam operations were initiated. About twenty minutes later, we received a request from Site One for an additional trauma doctor (Red Medical Team Manager) and controlled medications. The victim's lower leg was tightly pinned and it appeared that the doctor might have to amputate. Rescue personnel pressed on, eventually they were able to extricate the man's leg without medical intervention.

A strategy meeting was conducted at 3:30 a.m. to determine the rotation cycling for this mission. Different from the Turkey mission, personnel were split and placed on alternating 12-hour shifts this time. The task force organizational chart was split into Red and Blue Teams, with Red being the daytime shift and Blue the nighttime. The most difficult aspect was the first cycling period, where a short cycle must



occur. Everyone on the task force had been up for an extended period of time since activation (approximately 40+ hours). We had the Red Team off at 4:30 a.m. for a brief period for food and rest. At 9 a.m., the Red Team cycled on for the daytime shift (this would normally occur at 7 a.m.) and would work until 7 p.m. when the Blue Team would cycle back on.

Rescue operations were terminated at Building A / Site One at 9:40 a.m. Red Search & Recon Team was assigned to Buildings C, D and E at 10 a.m. which resulted in extended electronic search operations on the 6<sup>th</sup> floor of Building C and the ground floor of Building D where technical search specialists detected soundings with the Delsar acoustic device. These operations proved negative and all operations at Buildings C, D, and E were terminated at 1:30 p.m.

Only six major buildings collapsed in Toului. After some 35 hours on the ground our operations were completed. We offered to conduct distant search and rescue operations from our current BoO (with our own vehicles we could easily deploy assets by ground within a 20-30 mile radius). Alternately, we offered to deploy to a different city, if required.

Ironically, local officials did not want to use us for other search and rescue operations. They requested that we stay at least another week to perform body recovery. Chinese culture places a very high value in seeing the bodies of their deceased relatives. It required a series of meetings with officials to get them to understand our mission and purpose.

We are only willing to risk a life to save a life. These buildings were extremely dangerous and needed to be taken down. Cultural differences make it more difficult to communicate across language barriers. After extended conversations, they eventually understood our concerns. They requested that if we couldn't remain for body removal, we should demobilize as soon as possible. In a period of six hours, we broke down our BoO, loaded our vehicles, and departed for our four-hour return trip to Taipei.

The planning officers and task force leaders were also kept busy with task force management even during this period of the mission. Room assignments, personnel accountability, and hotel billing and accounting are important details that couldn't be overlooked.

These management issues were reinforced during breakfast the next morning when we experienced a significant aftershock. One measuring 6.8 on the Richter scale occurred in the same area where we had just operated. The 10-second temblor was very apparent in our hotel 110 miles away. Those of us in the dining room on the first floor felt extensive lateral movement and saw the swaying of the massive chandeliers. Other personnel still in their rooms on the eleventh floor experienced even more movement. We had task force management personnel maintain radio communications even during this phase of the mission. Our safety officers transmitted an evacuation order for all personnel after the shock.

We had never experienced redeployment while on a current mission. Within 15 minutes, we were directed by OFDA personnel to prepare for redeployment back to the epicenter. The Foreign Minister of Taiwan requested our help after receiving reports of high-rise buildings and a school being used as a relief center had collapsed. It turned out that the collapsed buildings had been vacant since the original earthquake. Most amazing was the layover of a 12-story building that fell, laying its full length into the street. It happened in such a smooth fashion that it remained fully intact on its side, even to the point that the glass in the windows didn't break.

## Lessons Learned

- This mission again confirmed our desire to use military air transport. We were able to fly non-stop to Taiwan performing two in-air refuelings during the 18-hour flight. The use of the C5A aircraft allowed us to transport all task



force personnel and the full cache on our vehicles, a 40-foot tractor-trailer and two 16-foot box trucks. Having the cache loaded on our vehicles saved us tremendous time and effort with cache loading and movement, and provided operational flexibility moving personnel and equipment around work sites once the trucks were emptied.

- We again set up our BoO in total darkness. Our Apparatus Shop is now designing modifications to our tractor-trailer to allow us access to immediate lighting. Saddle trays will be fashioned under the trailer that will hold several generators, quartz lights/stands, electrical cords, fuel cans, and other needs (as well as mounted telescoping lights on the trailer) that will allow us to quickly light the area. Before, it took too long to deploy all essential lighting items from the trucks and forced us to work in the dark for a significant amount of time. We feel this will be a tremendous improvement.

- Lack of information enroute is an unsettling aspect of a response. Our travel times can be 13 or more hours in the air. We are working with OFDA and U.S. Transportation Command to establish e-mail and other communications channels for situation updates enroute to a mission.

- Nairobi (like Oklahoma City) was principally a single-building incident. Izmit and Toulieu presented multiple buildings, some with more than one rescue work site per building. An effective process we developed in Izmit, and used successfully in Toulieu, was to designate buildings by a separate letter and each rescue work site by a separate number. This worked quite well and was a tremendous improvement over what we tried to do in Turkey.

- Personnel accountability is obviously important. As we learned, this must be maintained throughout all phases of a mission, even during demobilization. Safety officers need to establish an evacuation plan at the demob hotel when returning home.

- Work site identification is also important. We were quite pleased with the standard of

having buildings lettered and sites subsequently numbered. This made our tracking and identification of various work sites more accurate. This was especially true when referencing various sites over the radio.

Task Force Leader John J. Brown, Jr. and I would like to congratulate the personnel of VATF-1 for their outstanding efforts on this mission. We were proud of being able to effectively mobilize for another mission response only three weeks after returning from Izmit, Turkey. This is a tribute to many people in the Department, both those on the task force who did not deploy, as well as other career and civilian personnel who go to incredible lengths to support the overall mission. Probably most important is the dedication and understanding of the families. Waiting at home and wondering about the safety of their team member is quite stressful. We appreciate their efforts and understanding. We hope that our efforts in some small way helped the people of Toulieu and that they will begin to rebuild their lives. ❖



# Düzce, Turkey Earthquake Response

*By Battalion Chief Michael Tamillow  
Battalion 3, B-Shift*

**O**n Friday, November 12, an earthquake measuring 7.2 on the Richter Scale hit northwestern Turkey near the town of Düzce (pronounced "dooz-jay") located 120 miles east of Istanbul, which left more than 700 dead and 5,000 injured. The earthquake occurred at approximately 9:30 p.m. Again, an earthquake struck in darkness making initial impact assessment difficult. This was the second major earthquake to hit Turkey in the last three months. A 7.8 magnitude earthquake hit Turkey on August 17. An aftershock of 5.8 magnitude followed on September 13, collapsing several abandoned buildings. The earthquakes wreaked havoc on the region, leaving thousands dead, and hundreds of thousands injured or homeless.

Fairfax County's Urban Search and Rescue Team, Virginia Task Force One (VATF-1) was again placed on full activation for the earthquake at 6 p.m., just three hours after it struck. The mission was our quickest yet.

After assembling all personnel and cache equipment in about four hours, and transporting them to Dover Air Force Base, Delaware in a little over two more, we went "wheels up" at 6:30 a.m., only ten hours after activation.

Murphy's Law always lies in waiting during any mission response. After being airborne for more than an hour and a half, we had to return to Dover AFB to address a mechanical problem. The autopilot circuitry used during in-air refueling was not working properly. This procedure, requiring the pilot of the C5A to fly in close formation behind and below the tanker is a

difficult undertaking, even with mechanical assistance. The pilot stated that it can be difficult for the aircraft to attempt this in a manual mode because the turbulence experienced by the C5A from the tanker (and consequently being countered by the pilot) is so intense that it can sometimes cause stress cracks in wing sections. The electronics smoothes this aspect to manageable levels. After returning to Dover, parts were eventually taken from another C5A and we were airborne again at 1 p.m. (a loss of six hours).

We arrived in Istanbul at 7 a.m. on

Sunday, November 14, local Turkey time, after a flight of 17 hours. While addressing arrival issues such as personnel and vehicle off-loading, passport verifications, etc., we launched an advance group of officers at 8 a.m. for the 125-mile trip to Düzce. The task force followed at



9:20 a.m., a two-hour plus delay at the airport. As the advance group arrived in Düzce, we were able for the first time to experience an effective On-Site Operations Coordination Center (OSOCC) established by the United Nations. After the lessons learned from the last earthquake in August, the military exerted significant control of the operations in Düzce. This allowed UN OSOCC personnel to provide necessary assistance, acting as a mediator for military and other international response teams. Our task force was assigned a section of the city (Area 23) that comprised approximately 30 square blocks. We were also provided a helicopter overflight of Düzce and neighboring Kaynasli ("ki-nash-lee"), another hard-hit city 10 miles to the east. We were able to select a good site for our Base of Operations (BoO) in Düzce prior to the arrival of the task force later that afternoon.

International response to Düzce was incredible. The UN OSOCC reported that more than 40 teams responded to this earthquake. This turned out to be problematic, because the damage was more focused towards the two smaller cities. As such, we were in the center of Düzce with more than 25 other teams, each vying not only for assignments, but also trying to find an area to set up operations.

Getting around most cities during international responses is a challenge at best. Street names are in local language, but most intersections do not have street signs. Compound this with buildings collapsed into and blocking streets, it becomes quite challenging. Many of the other international teams arrived prior to us because of shorter travel distances. They performed many searches (prior to the designation of assigned areas by the military) but had not done any building marking. As such, many buildings were searched multiple times, wasting precious resources.

Communications for a task force is a challenge at all levels. We now issue portable radios to all personnel on the task force.

Contact and communications, especially with language barriers and safety concerns, made this essential.

We have several experts on our task force (in particular Tech Info Specialist Craig Luecke) who have designed and managed our task force web page – vatf1.org. This proved to be a useful task force management tool in providing information to team members. Another improvement made on this mission was the use of one-way e-mail. During the family teleconference, families were provided an e-mail address so they could send a message to their team member (they were asked to keep it to a short paragraph to keep the upload/download times to manageable levels). As you can imagine, "e-mail call" became an important part of the day when the printed e-mails were distributed to personnel. It was much appreciated by all.

Base of Operations set ups have become a consistent routine. We use Western Shelter tents for our needs — five 19'X35' rectangular and two 18' octagonal tents. This was the first time we had to use kerosene heaters with the tents. The weather was cold (below freezing) at night and warmed up into the high 40's during the day. Different from our first mission in Soviet Armenia in December 1988, where we were living in light camping tents with no floors or heat in freezing weather for a week, this was a significant improvement. Our tents have a heavy vinyl floor, fluorescent lighting and workspace shelving, making them quite functional.

We experienced significant rain the latter half of the mission. This can make things especially dreary. Also, kerosene heaters give off moisture as a by-product of combustion. Once sleeping bags become damp or soggy, the safety of personnel is compromised when nighttime temperatures fall. We maintain a small number of folding cots in our cache, principally for the medical treatment tent. While the cots are light weight, they take up a considerable amount of space. While our cache weighs in at approximately 30 tons, our problem in terms of air transport is not weight but cube. After this



mission, we will keep 70 cots in our cache at our central US&R Fire and Rescue Station 18. When dispatched to colder climates, we will use these cots.

We also brought Western Shelter shower units (two double units for a total of four showers). We have a foldable container that can hold several hundred gallons of water as a reservoir for the showers. A propane heater unit warms the water to make it a little more tolerable. Bathroom facilities are also an important aspect of task force comfort and hygiene. On this mission, the local water and sewer infrastructure was out and we had to rely on our own cache. We recently purchased a bathroom system called "Brief Relief" that consists of small upright tents (we have three). A 5-gallon plastic pail has a toilet seat-type top. The heart of the system is two types of plastic bags, one for liquid and one for solids. They hold a chemical that solidifies and neutralizes waste products. It is a very simple, sanitary system and was quite a hit with everyone. We had several hundred of each type bag, but with 70+ people in the base we ran out on day four. (A humorous use of this system occurred one afternoon when, for some reason, an RAF helicopter hovered over our base which was near the helicopter landing zone. The tremendous rotor down wash almost blew away our Western Shelter tents. A team member was in the bathroom tent when this occurred. Bystanders said it was quite comical, watching as he tried to maintain his balance on the 5-gallon pail, keep his trousers from falling in the mud and holding down the flailing and moving tent. For some reason, he was not amused.)

Virginia Task Force One operated for four days in Düzce. We thoroughly searched our assigned area of approximately 30 square blocks and also conducted extended operations at seven rescue sites. Live finds were extremely low for all teams. Our personnel performed extensive de-layering operations on several buildings in conjunction with local crane and backhoe operators. Operations at Site One lasted more

than 22 hours. Their experience of finding viable voids after removing floor layers kept hopes high. I was extremely proud of our personnel.

### Lessons Learned

- "Be careful what you ask for, you just might get it." By their very nature, US&R task forces have high esprit-de-corps. While no one wants disaster to strike, we do want to exercise our skills if it does happen. We've had periods in the past where several years have come and gone without a response. To be activated four times in the past 14 months was a distinct honor. The three most recent responses occurred over a period of 14 weeks! Upon return from Toulou, we responded to Düzce, Turkey, six weeks later. We are proud to be capable of responding fully in such a short turnaround period.

- Equally so, it has been stressful on our organization and our families. We have been able to make significant improvements in our system because of the frequency of these missions. Scheduling has been a challenge. We were ready to conduct our formal task force after-action meeting for Izmit when Taiwan intervened. Our now combined Turkey-Taiwan after-action was to be conducted on Saturday and Sunday, November 13-14. We activated for Düzce on Friday November 12. With conflicts in finding available space during the holiday seasons, we will not schedule our Turkey-Taiwan-Turkey after-action until after the New Year. We are identifying and correcting deficiencies and making improvements faster than we can document them in after-action reports.

- Selection of personnel who will respond on a mission is more an art than a science, and controversial at best. Everyone on the team always wants to go and those not selected feel the system needs immediate improvement. We have always conformed to a standard of having the majority of the response staffed by experienced personnel. Equally so, we also

strive to include personnel who have not been activated, trying to increase our experience base.

- Base of Operations site selection and set up is a critical aspect of successful mission response. After much experience, we are resolute about selecting a site that has a hard surface (asphalt, concrete) whenever possible, even if the distance to the worksite is farther away. Düzce was a perfect case study. We set up in close proximity to 15-20 other international task forces in the central part of town. While we shared a school parking lot with the Denmark team, most teams set up in a central park area in town composed of sidewalks and grass. As the weather changed to extended rain, their areas became a quagmire. Mud was tracked everywhere throughout their bases. The cache was more difficult to maintain.

- Even on a hard surface, rain and runoff can be a problem. While our parking lot had a slight pitch, water did pool two to three inches deep adjacent to and under several tents. However, our personnel were inventive. They used a Cobra impact tool to breach through the asphalt and create a sump at the lowest level. They then used a sump pump and removed the standing water. This helped tremendously in trying to maintain fairly dry tents. We found several small two-gallon wet/dry shop vacs. These were useful (with the squeegee pickup head) for vacuuming up water and mud on the inside of the tent floors.

- Aftershocks, some quite strong, have been a consistent part of our last three earthquake responses. We are also exploring ways we can make our base more "earthquake resistant." We assess collapse potentials from adjacent structures (as well as overhead / adjacent utilities, etc.) whenever we select a site. Equally so, we find that we can take measures to improve the safety of our base. Nothing should be stacked higher than waist high (we had stacked drinking water and MRE boxes six-feet high which could severely injure someone had it fell during an aftershock). Also, the way we organize and set up the sections of our base could be handled

better. The shelving inherent in the Western Shelter tents is attached to the frame uprights with a clamp similar to a c-clamp that is held in place by a threaded bolt that tightens against the upright. These can loosen on their own over time. The shelving could easily collapse during a significant aftershock. Also, even if the shelves remain in place, much of what we place on them is susceptible. Laptop computers, copy machines, satellite telephones, etc. are expensive, important elements of task force management. These could easily fall from the shelving and break. We are looking at using Velcro or some other system to better anchor them.

In conclusion, we were proud to assist people in need and represent the United States. My yardstick for a successful mission is bringing all of our people home with all their fingers and toes. This is a testament to the dedication, training and personal discipline of the personnel on our task force.

Disaster response is a contradiction of efforts. Our efforts have been directed towards launching quickly in order to arrive quickly, enough for life-saving operations. Success in this respect can be offset by having to make decisions based on limited or incomplete information. In Taiwan, we felt we should have been assigned to an area with more widespread damage. Assignments are often made before solid assessment information is available. In Düzce, response teams launched based on the severity and location of the earthquake. It turned out that due to the prior earthquake, many buildings that collapsed in Düzce this time had already been abandoned. This kept the injury / death rates much lower compared to Izmit. Ironically, had the earthquake been delayed, it may have been more deadly as people in Düzce had just begun to reoccupy the buildings because of the onset of cold weather.

Our challenge now is to activate quickly and direct appropriate response assets to areas of need based on the teams' capabilities. This is a worthy goal. ❖

# *Hot Shots*



Turkey I



Turkey I



Turkey II



Taiwan



Taiwan



Turkey I

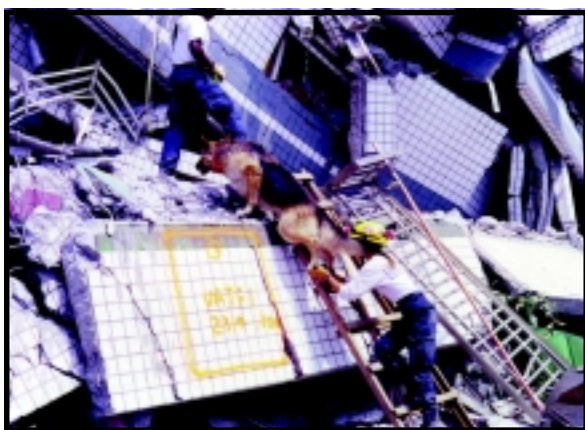


Turkey I



Turkey II





Taiwan



Taiwan



Turkey I



Turkey II



Turkey II



Taiwan



Turkey II



Turkey I

# Thank You from Mrs. Ayse Cesen – From Victim to Rescuer

*By Captain I Bernard D. Bickham  
Station 18, B-Shift*

All recon teams were deployed and the four Rescue Squads were working different sites. The base of operations was virtually abandoned. I was out of the base of operations (BoO) when I heard Captain II Dewey H. Perks on the radio stating, "We have a live find and I need a rescue squad right away. All squads were already committed so I grabbed a couple of people and went to assist Captain Perks. That rescue took a couple of hours. We were within five minutes of the base of operations so we returned for an update.

Within minutes, another Turkish citizen came to the BoO with information about another potential live find. Once again, all assets were committed. Not wanting to put off a potential rescue, I recruited Technician David L. Taylor, logistics, Lieutenant Kea A. Zimmerman, medical; we were then driven to the site. When the three of us arrived, we found the local citizens digging and calling for us. The first thing we encountered was a softball size hole that we could not see into. We asked for quiet and attempted to make voice contact. The victim was able to make some noise and our challenge began.

Through our interpreter we told the lady that we were going to get her out but it would take awhile. The site was probably the worst site I worked, there were overhead widow-makers (large slabs of concrete that could fall and critically injure rescue workers) that we could not make safe. The three of us evaluated the situation, I then called for a rescue squad for assistance. I lost track of how long it took the rescue squad to arrive, but Dave, Kea, and myself had systematically and cautiously, by hand, using bars and hammers, enlarged the opening to the

point that we could access the room where Ayse Cesen was trapped.

At this point, additional rescue squad members arrived and we enlarged the opening enough to see her. Compounding the rescue effort was the size of the victim, she was very large. We worked to a point where we encountered a queen-sized mattress that was impeding our access to the victim. Not having the appropriate tools at the time, we used our Gerber and Leatherman tools to cut the mattress. This was difficult and time consuming, but we had trained at this many times previously.

There was a little humor in this tragedy. We try to train in the same scenarios that we are likely to encounter. One of the scenarios we enjoy putting rescue specialists through is the mattress drill. This is where we place a box spring and mattress in a very small area that the crew needs to cut through to retrieve a victim. This is very tedious and usually generates new nicknames for the instructors. Captain I Joseph M. Kaleda's crew arrived to relieve us. When I was passing on the status of our work, I told him we had the mattress drill. He said "oh great." I took over as site manager and Captain Kaleda directed the rescue squad. During the extrication we encountered two after shocks that required us to retreat to a safe area for a few minutes. After watching the building shake like Jello, we re-evaluated the site and saw that some of the furnishings from the upper floor apartments had moved toward the edge and might fall if another aftershock occurred. With no other way to make the area safe, I directed the machine operator to put his clam shell bucket in front of the furniture without touching the furniture or the building. Once this was in place, it afforded us protection



from fall hazards and we went back to work. In about four hours, we made the hole as large and safe as possible. It still wasn't large enough to extricate the woman. During the operation, the medics evaluated Ayse several times.

Approaching the four-hour point, the doctor told me that we needed to get her out as soon as possible and that time was crucial.

After conferring with Captain Kaleda and Captain Robert C. Dube we felt that she wasn't able to assist us in getting herself out and we decided to wrap her ankles with webbing and try to pull her out. In spite of adverse conditions, she was finally freed, treated by our doctor, and transported by local ambulance to the hospital. As she was being removed from entrapment, the local Turkish people gave a loud round of applause. This was very gratifying. It took us



about 30 minutes to gather our tools and reload the truck. We had just gotten back on the truck for a trip back to the BoO when we heard the familiar call, "We have another live find, send me a rescue squad." Totally exhausted, but proud as peacocks, we were ready to go. We started off to the fourth live rescue of the day.

At about 1 a.m. on the third day, we finally got some long overdue rest. The next morning when I woke up, I was told that there was a 5.0 aftershock that rocked the camp and had almost everyone scrambling. Everyone but me, I didn't even feel it!

The following day, while pursuing more leads, Ayse Cesen came up to Technician Evan J. Lewis and said thank you for rescuing her. She then proceeded to join the rest of her family in digging for victims in a collapsed structure. ❖



# Virginia Task Force One Records

## Rescue Number Four

*By Captain I Robert Dube'  
Fire and Rescue Academy*

**A**t approximately 10 p.m. on August 19, 1999, the first day of operations, Rescue Squad One and myself were disengaging from the site of patient number three when we were dispatched to assist Rescue Squad Two. Upon arrival, they informed us of another victim that had been located within 400 yards of their site. Rescue One, along with members of Rescue Three and Operations, Captain Dan Bickham; Technical Manager, Captain Joseph M. Kaleda; and Medical Manager, Doctor Barker responded to this new site. Upon arrival, we found a six-story, multi-dwelling building constructed of concrete and terra cotta tile. The structure had collapsed into a pancake. The height of the rubble was approximately 40 feet. The patient, a 46-year-old male, was located on side four of the building. He was trapped in a squatting position, less than ten feet from an opening at ground level that had been dug out by locals. After doing a quick assessment of the patient we determined that he was not pinned, but entrapped in a void space. This void space was six to eight feet deep and the patient was surrounded by concrete slabs, rebar, terra cotta tile, and crushed furniture. Through an interpreter, we asked him his condition, but he did not reply, only mumbled. We discovered later that he was in fact mentally retarded and did not speak clearly. After conferring with the structural engineer, we determined there were two areas that needed shoring prior to digging. There were also some overhangs we could not support and could only monitor.

Cribbing, used for the shoring was cut while some hand digging commenced. Rescue Specialist Reedy and myself dug out as much by hand as possible while other members, including

Rescue Specialists Technician Joseph E. Knerr and Master Technician Randal A. Leatherman cut away the large amount of exposed rebar that saturated the work area. When the cribbing was cut, we placed it in the two areas needed, and started cutting away some of the slab with the Bosch hammer and the Hilti. After about thirty minutes, we cleared out enough of an area to allow Rescue Specialist Lieutenant Ben A. Dye, to maneuver himself into the hole and get behind the patient. At this point, he discovered a dead victim (later found to be the patient's brother) under the patient. Rescue Specialist Dye had to sit on top of the victim in order to help remove the patient. With some additional digging, we cleared enough of an area to allow Medical Specialist Lieutenant Jeffrey S. Lewis to crawl into the hole and attempt to start an IV on the patient. Due to the position of the patient, he was unsuccessful and came back out. After conferring with Dr. Barker, we decided the best course of action was to continue to dig out the patient and not delay any further.

After another 15 minutes of careful digging and shoring, the patient was ready for removal. Rescue Specialist Knerr went into the hole, wrapped a piece of webbing around the patients arms and with the help of several others, they extricated him. After a quick assessment by Dr. Barker, the patient was loaded onto the local ambulance service and transported to the hospital. He had no serious injuries. ❖

# A Big Thank You To Department, Families

*By Captain I Bernard D. Bickham  
Station 18, B-Shift*

**V**irginia Task Force One (VATF-1) received a lot of praise from our rescue efforts in Turkey. I am very proud of the entire team on the most positive mission to date. We received all the glory. The people that stayed behind supporting us are usually not acknowledged. I want to thank everyone in the Fairfax County Fire and Rescue Department and acknowledge their support, but I especially want to thank all the members and their families that had to work and give up their off-time to back fill our positions. I know many

firefighters and paramedics are required to work holdover and mandatory recall to fill the 70-plus team positions and numerous other positions that are necessary for our mission. Even though you are not members of VATF-1, you supported the mission and made it possible for the Fire and Rescue Department to continue to provide the highest level of emergency service possible to the citizens of Fairfax County. Every member of the Fairfax County Fire and Rescue Department should share our success. Thank you and your families for being part of this mission. ❖



# Continued Department Support, Crucial To VATF-1 Success

*By Battalion Chief Dewey H. Perks  
Urban Search & Rescue Program Manager*

**A**fter the tents have been struck, the equipment re-packaged, and transportation secured, the members of Virginia Task Force One know that they will soon return home to the warm embrace of family and friends. Oftentimes our return is trumpeted by Department officials and other dignitaries who praise the group for all to hear for the job it performed while on a mission. More often than not, however, the true performers are sometimes overlooked in all this hoopla and it is important to us to set the record straight.

Virginia Task Force One is embellished by the news media as "America's elite search and rescue team." You know us as the men and women who work beside you everyday in stations throughout the County. Although given the mantle of "hero," you know us for what we really are – public servants, just like you. While the task force membership comprises less than one percent of the members of the entire Fairfax County Fire and Rescue Department, it often receives 100 percent of the public recognition. Seemingly unfair until you consider what we wear proudly on each mission, the words FAIRFAX COUNTY, VIRGINIA, for all to see.

When the task force is activated, all things in life seem to stand still for those involved in the mobilization. The Academy is cleared of all activities to ensure adequate space is available for the team to assemble and leave for parts unknown, members of Senior Staff cancel meetings to monitor our progress, and finally we depart. Hopefully, this has all taken place in less than six-hours, but what else has been going on?

In that same timeframe, on-duty personnel know that their morning relief has disappeared, equipment is transferred to fill created voids, and calls continue to be dispatched and responded to

by the personnel of this dedicated, professional Department.

The men and women of the Fairfax County Fire and Rescue Department are a truly unique family. As is typical in a family, we often quarrel with each other, but deep inside we know that we will support each other to the bitter end if someone outside our circle attempts to disparage or intrude. Task force members know that when we depart, vacancies will be filled, training will be done, calls will be run, and most importantly, lives will be saved. We know that what we are attempting to do thousands of miles from home is the same challenge you are facing here. You see, we view the task force as an extension of the Department, running mutual aid if you will, with another neighboring jurisdiction in need.

It goes without saying, that to those who deploy, you who stay behind are the real heroes of any task force mission. Without your strong commitment to the citizens of Fairfax County, the Department could not afford to allow us to go, nor could the team continue the good work, worldwide, that you accomplish here everyday. It gives us great pleasure to tell anyone who may ask, "Where are you from?" We are members of the Fairfax County Fire and Rescue Department. Thank you for the career you have chosen and bless you for the job you do. ❖





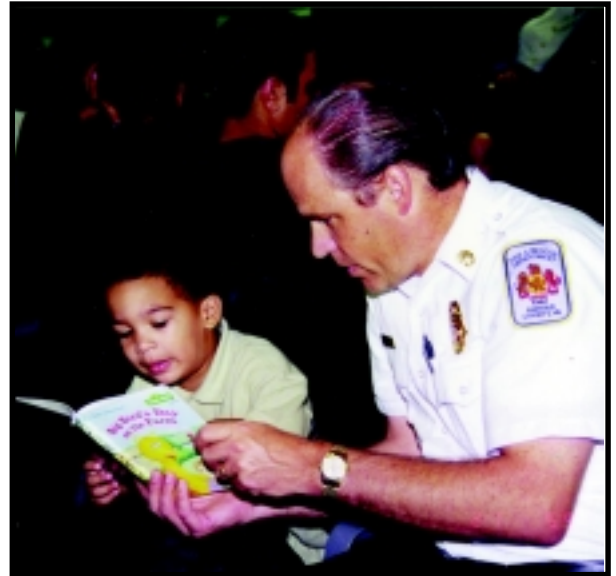
Nightly teleconferences to keep team family members informed of the status of VATF-1 members took place in the Operations Center. From left to right are Battalion Chief Larry B. Johnson, Technician Francis O. Mensah, and Chief Edward L. Stinnette.



Personnel supervisor Brenda Tincher checks in family members prior to being transported to Dulles Airport to welcome home VATF-1.



Technician Donald C. Booth receives a welcome from Fairfax County Board of Supervisors Chairman Kate Hanley.



While waiting for VATF-1 to arrive at the airport, Deputy Chief Michael P. Neuhard shares reading time with the son of team member Technician Kevin R. Dabney.

**Virginia Task Force One team members that contributed photo's for this special addition of *Line Copy* are:**

Anthony Bealle  
 Lieutenant Craig S. Luecke  
 Technician Mark J. Plunkett  
 Lieutenant Michael P. Regan  
 Battalion Chief Michael T. Reilly  
 Technician Rex E. Strickland  
 Lieutenant Lorenzo M. Thrower  
 Paul E. Torpey  
 Captain I Steven I. Weissman

*Line Copy* can be viewed on the Fairfax County Fire and Rescue Department Web Site.

Our Web Site address is:

<http://www.co.fairfax.va.us/fire>

# The Team is Back, Again!

By Janet Bickham

Wife of Captain I Bernard D. Bickham

**T**hey endured a thirteen-hour flight to Istanbul, Turkey, and drove another three hours to rescue people from the earthquake's damage. They stayed for five days, rescued four people, and returned; worn and tired, but happy to have done their job. By now, the most important things have been established—they are safe and have seen their families, friends, and stateside comrades. Somewhere out there, I'm sure I heard a large collective sigh of relief and thanksgiving. Now we are trying to get on with our lives, as though it has been just a momentary interruption, or as Dan puts it, "Just another day on the job." Somehow, I can't quite dismiss it that easily. After 11 years of conference calls and watching television for news at all hours, as well as "daily briefings" to family members, it's anything but business as usual! Those of us who are left behind must continue on with the daily activities and added responsibilities, all the while hoping and wondering about

the team and their mission. Many of us do this in a smooth polished manner, while some others are caught in a sort of "holding" pattern. We all make it through and are glad when our team members are finally home.

During a mission, other members of the Fire and Rescue Department step in and keep everything running for Fairfax County. All this is done in a smooth operation that has to tax all those concerned to their limits. But it is done again and again because of their professionalism and integrity. I would like to thank the firefighters, academy staff, office staff, and the operations center people, all of whom made this mission a success, both away and at home. My thanks also to the Dunn Loring Auxiliary, who helped with the family picnic and homecoming reception. Thanks as well to the other wives, family members, and friends who stepped in and helped me, as well as others back here. This week we had a family debriefing, which always helps me to put

everything into perspective and move on. Our Fire and Rescue Department gives us an extraordinary amount of support and I feel we are already ahead in that respect; but we can always learn more to help us on the home front. Over the last thirty-some years, I've seen our Fire and Rescue Department grow in size and professionalism. Most importantly, we have maintained our sense of community and caring. I am proud to be a Fairfax County Firefighter's wife!



*Virginia Task Force One returns to Andrews Air Force Base from the first Turkey earthquake.*

COUNTY OF FAIRFAX, VIRGINIA  
*Resolution*

WHEREAS, Virginia Task Force One was given the ultimate challenge of saving lives amidst the twisted steel and rubble piles of concrete; and

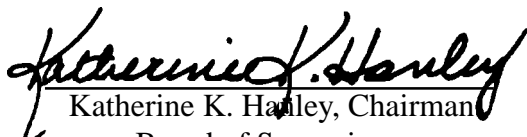
WHEREAS, Virginia Task Force One deployed at a moment's notice, without hesitation, leaving families and loved ones behind; and

WHEREAS, Virginia Task Force One worked tirelessly, around the clock, as the entire world watched and prayed that they might be successful in saving human life; and

WHEREAS, Virginia Task Force One with all of their expertise in urban search and rescue, including cave-in experts, canine teams, physicians, paramedics, logisticians, command and control personnel showed the American people their selfless dedication to human mankind; and

WHEREAS, special thanks and recognition should be given to the firefighters who graciously filled the void during their absence, and above all, special gratitude goes out to the families of Virginia Task Force One who patiently waited for their safe return; now therefore

BE IT RESOLVED that the Fairfax County Board of Supervisors, on behalf of the citizens of Fairfax County, does hereby declare its pride and appreciation in Fairfax County's Urban Search and Rescue Team and for its dedication to duty and total professionalism in responding to a world tragedy in Turkey, demonstrating unmatched skill and heroism, and doing what is most important to everyone: saving lives.

  
Katherine K. Hanley, Chairman  
Board of Supervisors

December 6, 1999

Date





## Fairfax County Fire & Rescue Department

Attn: Public Information and Life Safety Education Section  
4100 Chain Bridge Road  
Fairfax, Virginia 22030

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